

## JUMPING OR SKIPPING PLAYTHING

### FIELD OF THE INVENTION

[0001] The present invention relates to an improvement in a game or amusement device particularly used by children for jumping or skipping, and having a ring through which one foot is placed, and whereby the user rotates the ring part of the device about the foot while hopping over an elongated element which extends from the ring.

### BACKGROUND OF THE INVENTION

[0002] Devices of the above general type are known (e.g. Arad ET al USP 4,875,675; Liquori USP 3,140,871; Larson et al USP 3,528,654; McGowan et al USP 6,113,452; Shure et al USP 5,603,651), and these include the aforementioned ring at one end, the elongated element, e.g. a rope-like element, hereinafter referred to as a "connector" extending therefrom, and a wheel, e.g. for counting rotations, or roller element of the some type, at the opposite end of the connector from the ring. The roller or wheel provides both a weight at the opposite end of the connector so as to provide more efficient swinging of the device about the ankle of the user due to the effects of centrifugal force, and also in some devices rotates along the ground or other supporting surface on which the device is used, e.g. about an axis generally concentric with the connector.

[0003] The wheels or rollers of some of the prior devices are fixed to the end of connector so that the wheel or roller may rotate about the connector and along an axis at least parallel with and normally concentric with the axis of the  
5 connector.

#### **SUMMARY OF THE INVENTION**

[0004] The present invention is directed to an amusement device of the general type indicated above wherein special visual effects are created by providing a decorative connector  
10 which itself rotates relative to the ring and which, as it rotates, provides special visual effects.

#### **BRIEF DESCRIPTION OF THE DRAWING**

[0005] For a more complete understanding of the present invention, reference is now made to the following description  
15 of an embodiment of the invention taken in conjunction with the accompanying drawing figures in which:

[0006] Fig. 1 is a perspective view of a device according to the present invention;

[0007] Fig. 2 is an exploded cross-sectional view of the  
20 device, partly broken away, showing the joint which connects the ring to the connector so as to permit rotation of the connector;

[0008] Fig. 3 is a partial cross-sectional view, partially schematic, taken through the connector element of the device of Fig. 1; and

[0009] Fig. 4 is an exploded view of the device of Fig. 1.

#### DETAILED DESCRIPTION OF THE EMBODIMENT

5 [0010] An amusement device 10 according to the present invention comprises an ankle ring 12 through which one foot of the user is placed for rotation about the leg or ankle of the user, the ring 12 having a connector 14 extending therefrom as shown in Figs. 1 and 4, the connector 14 being in the form of a twisted flattened plastic rod or narrow twisted sheet as described in more detail below. At the opposite end of the connector 14 there is mounted a ball 16 optionally having a rubber or PVC tread 18 or the like extending thereabout. A wheel, not shown, may be substituted for the ball 16.

[0011] Contrary to prior devices of the present type, a swivel or pivot section 13 is provided between the connector 14 and the ring 12, whereby the entire connector 14 is able to rotate as the ball 16 or wheel rotates and moves across the ground or floor, the connection 20 between the connector 14 and the ball 16 or wheel being preferably rigid or semi-rigid.

20 [0012] However, it is within the scope of the present invention to provide a second swivel or pivot at the joint 20 at the opposite end of the connector 14 whereby the ball 16 or

wheel would rotate at a faster rate than rotation of the connector 14, i.e. in such an optional embodiment the pivot at connection 20 must be tighter or adapted to provide intermittent relative rotation so that, consistent with the main objective of the present invention, there will be at least a significant amount rotation of the connector 14 about the pivot section 13.

[0013] According to another aspect of the present invention, the connector 14 is a flattened element which is twisted or spiraled. The twisted connector 14 is desirably translucent or transparent and contains a fluorescent, phosphorescent or luminescent dye or pigment therewithin as disclosed in Kessler USP 5,092,809, incorporated herein by reference, so as to provide an edge glow effect, referred to in Kessler '809 as a "glowing" or "neon edge" appearance or quality. In one preferred embodiment, the flattened and twisted connector 14 has a width of about 4.5 cm and a thickness of about 4 mm.

[0014] The transparent or translucent plastic from which the twisted connector 14 is formed thus contains such an appropriate fluorescent, luminescent, phosphorescent or "day glow" dye or pigment, hereinafter sometimes generally referred to as a "fluorescent dye" whereby the edges 15 of the twisted connector 14 have the ability to glow in the presence of light

as indicated above, and as shown schematically in more detail in Fig. 3. Thus light L enters the side surfaces of the twisted connector rod 14 and is transmitted to the edges 15, producing a luminescent or iridescent or "neon edge" glowing effect very noticeable by and pleasing to the human eye. As the twisted connector rod 14 rotates about an axis through the pivot section 13, interesting visual patterns are produced.

[0015] Particularly if the flattened and twisted connector 14 is formed of transparent plastic, it may also contain metallic glitter flakes and/or pearlescent particles, known per se, incorporated therein during its molding, along with or in place of the aforementioned fluorescent dye. Preferably, however, the twisted or spiraled connector 14 contains both a fluorescent dye and decorative flakes or particles.

[0016] In an alternative embodiment, the flattened and twisted connector 14 is formed of an opaque plastic and is provided with different colors on opposite faces, e.g. red on one side and yellow on an opposite side, or blue and red on opposite sides, or red and white on opposite sides. As the twisted connector then rotates during use of the device, the effect is like a rotating barber's pole. Surface decoration may also be provided on other parts of the device 10.

[0017] An important feature of the present invention is the pivot section 13 between the twisted connector 14 and the

ankle ring 12, a preferred pivot section being shown in Fig.

2. Such pivot section must be sturdy, and at the same time permit free rotation of the twisted connector 14 and the ball 16. In the preferred embodiment as shown in Fig. 2 a strong

5 plastic or metal pin 131 is riveted to the ankle ring 12, the pin 131 having a head, T-shaped in cross section, retained within a hollow pin head holder tube 132, U-shaped in cross section, in turn riveted to an end of the twisted connector

14. To further facilitate free rotation between the pin 131

10 and the pin head holder tube 132, a lubricant, e.g. a silicone grease or oil or the like, may also be placed within the connector 132 adjacent the head of the pin 131.

[0018] The ring 12 and the ball 16 may be of conventional types such as shown, for example, in the aforementioned

15 patents to Arad et al 4,875,675; Liquori USP 3,140,871; Larson et al 3,528,654; McGowan et al USP 6,113,452 and/or Shure et al USP 5,603,651, and may be formed of conventional materials consistent with such known prior art.

[0019] The twisted connector 14 is desirably formed of a  
20 strong and either rigid or slightly flexible plastic such as polycarbonate resin; polyethylene terephthalate (PET); opaque, transparent or translucent styrene-butadiene copolymer; or opaque, transparent or translucent plasticized vinyl resin. Other plastics may be tested for suitability in a routine

fashion. However, the connector 14 must be relatively strong and flexible, so polycarbonate resin is preferred.

[0020] As indicated above, the pin 131 may be formed of metal or plastic, but is preferably formed of polyethylene.

5 Similarly, the pin head holder tube 132 is also desirably made of polyethylene. Other plastics can also be selected, and alternative materials can be routinely tested for suitability.

[0021] The ball 16 is desirably made of ABS polymer, although other materials can also be used. The ball can be  
10 made transparent and contain glitter flakes, known *per se*. Alternatively, and as preferred, the ball is opaque and is provided with a decorative surface, either incorporated in the color of the plastic or as a surface coating.

[0022] The foregoing description of the specific  
15 embodiments will so fully reveal the general nature of the invention that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific embodiments without undue experimentation and without departing from the generic concept, and, therefore, such  
20 adaptations and modifications should and are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation. The means, materials,

and steps for carrying out various disclosed functions may take a variety of alternative forms without departing from the invention.

[0023] Thus the expressions "means to..." and "means  
5 for...", or any method step language, as may be found in the specification above and/or in the claims below, followed by a functional statement, are intended to define and cover whatever structural, physical, chemical or electrical element or structure, or whatever method step, which may now or in the  
10 future exist which carries out the recited function, whether or not precisely equivalent to the embodiment or embodiments disclosed in the specification above, i.e., other means or steps for carrying out the same functions can be used; and it is intended that such expressions be given their broadest  
15 interpretation.